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Supreme Court of the United States

October Term, 1997

KUMHO TIRE COMPANY, LTD., KUMHO U.S.A., INC. and HERCULES TIRE & RUBBER COMPANY, INC., *Petitioners*

v.

PATRICK CARMICHAEL, AN INDIVIDUAL AND FATHER AND NEXT OF KIN TO PATRICK CARMICHAEL, JR., A MINOR, LUZVIMINDA CARMICHAEL, AN INDIVIDUAL AND MOTHER AND NEXT FRIEND OF CARINA HORN, A MINOR, AND ADMINISTRATRIX OF THE ESTATE OF JANICE HORN, CARINA HORN, A MINOR, LEONA CARMICHAEL, SHAMEELA CARMICHAEL, AND NATIMAH CARMICHAEL, *Respondents.*

On Writ of Certiorari
To The United States Court of Appeals
For The Eleventh Circuit

BRIEF FOR THE AMERICAN AUTOMOBILE MANUFACTURERS ASSOCIATION, THE ASSOCIATION OF INTERNATIONAL AUTOMOBILE MANUFACTURERS, INC. AND SOCIETY OF AUTOMOTIVE ENGINEERS, INC. AS AMICI CURIAE SUPPORTING PETITIONER

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INTEREST OF THE AMICI CURIAE

The American Automobile Manufacturers Association ("AAMA") is a non-profit national trade organization. Its member companies - General Motors Corporation, Ford Motor Company, and Chrysler Corporation - are the largest automobile manufacturers in the United States. The Association of International Automobile Manufacturers, Inc. ("AIAM") is a trade association organized as a non-profit Virginia corporation representing United States subsidiaries of international automobile manufacturers that sell vehicles in the United States that are manufactured both here and abroad.[1] The Society of Automotive Engineers, Inc. ("SAE") is a non-profit educational organization dedicated to the advancement of mobility technology to serve humanity. SAE's members include engineers, scientists, and other professionals working in mobility engineering.[2]

The AAMA and AIAM have often represented their members before this Court and other tribunals.[3] The automotive companies are frequently targets of products liability lawsuits in state and federal courts which, inevitably, involve expert testimony on such issues as defect, proximate causation, comparative fault, medical subjects and others. Thus, the

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1 The members of AIAM include American Honda Motor Co., Inc., American Suzuki Motor Corporation, BMW of North America, Inc., Daewoo Motor Co., Ltd., Fiat Auto U.S.A., Inc., Hyundai Motor America, Isuzu Motors America, Inc., Mazda Motor of America, Inc., Mitsubishi Motor Sales of America, Inc., Porsche Cars North America, Inc., Rolls Royce Motor Cars, Inc., Saab Cars USA, inc., Subaru of America, Inc., Toyota Motor Sales U.S.A., Inc., Volkswagen of America, Inc. and Volvo North America Corporation.

2This brief was funded entirely by AAMA and AIAM and was authored entirely by counsel for Amici.

3 Pursuant to Sup. Ct. R. 37, both parties have granted blanket consent to the filing of amicus curiae briefs and letters from the parties so consenting have been filed with the Clerk of the Court.

automotive companies have a vital stake in the outcome of this proceeding. SAE is interested in advancing the integrity of sound engineering principles and practices, including the promotion of trustworthy expert testimony. Amici believe that strong efforts by trial courts are necessary to screen out abusive or unreliable expert testimony and, therefore, submit this brief in support of petitioners.

SUMMARY OF ARGUMENT

Expert-focused, high-stakes products liability litigation can generate mammoth verdicts, including punitive damages, with many polycentric effects. One would expect that such cases should receive high-calibre expertise on issues such as product defect, causation, medical condition and damages. Yet experience shows that many experts flourish as hired guns pushing the envelope of advocacy beyond reasonable limits and offering unreliable expert testimony. Even post-*Daubert* monitoring efforts by courts may be insufficient to police against junk science. That conclusion was effectively reached recently by the American Medical Association, which passed a resolution that makes medical testimony constitute the practice of medicine and subject to peer review.

Were it not for effective *Daubert* screening, as Amici's survey and case law reveals, products liability litigation would be even more rife with abuse such as testimony about untested concepts, mere possibilities, flawed testing, misinterpreted regulations, speculation about corporate motives, speculative warnings and, even, the offering of alternative designs that would present countervailing dangers to others. The foregoing developments counsel that *Daubert* gatekeeping needs to be invigorated, not weakened. Effectuation of the primary goals of tort and products liability law -- compensation and deterrence -- requires that expert testimony truly be reliable. When experts are allowed to offer untrustworthy opinions, these policy objectives are subverted. Similarly, the search for the truth and the public's perception of integrity of the court system will suffer.

Amici critically analyze the erroneous concepts advanced by the Tenth Circuit's *Compton* decision and by the Eleventh Circuit below that there is a purported distinction between science and engineering for application of *Daubert's* admissibility factors or that an expert should be immune from *Daubert* screening because he used no science or methodology but testified, instead, on the basis of his "experience". This approach rewards the expert who avoids science and creates an unwarranted exception to vigorous *Daubert* screening, an exception that could, in effect, swallow the rule. Amici also analyze the erroneous "beekeeper" analogy relied upon by the Eleventh Circuit and show why it is inapplicable to the expert in this case and, further, why it ought not be the basis for an "experience" exception to *Daubert* screening in typical products liability cases.

Finally, Amici show that *Daubert's* nonexclusive reliability factors provide judges with a flexible framework with which to weed out untrustworthy expert testimony and demonstrate, via the Seventh Circuit's "intellectual rigor" approach to the *Daubert* gatekeeping task, that an appropriate model exists illustrating a comprehensive, balanced, fair, consistent and effective mechanism by which unreliable expert testimony can be excluded.

ARGUMENT

I. FUNDAMENTAL POLICY OBJECTIVES COMPEL APPLICATION OF RELIABILITY STANDARDS FOR EXPERT TESTIMONY THAT ARE SOUND, RIGOROUS AND FAIR.

Amici are not surprised that the three major cases to challenge this Court in recent years regarding standards of trustworthiness for expert testimony stem from high-stakes products liability litigation. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) (Bendectin litigation alleging causation of birth defects); *General Electric Co. v.*

Joiner, 118 S. Ct. 512 (1997) (PCBs allegedly caused small cell lung cancer); *Kumho Tire Co. v. Carmichael*, No. 97-1709 (U.S. Sup. Ct.) (cert. granted June 22, 1998) (litigation involving alleged defect in tire causing accident). Products liability claims spawn significant evidentiary tensions, in part, because their resolution in court frequently revolves around the integrity and reliability of the expert testimony. Experts usually opine upon issues of "defectiveness," "causation" and the nature and extent of injuries or other elements of damages.

A. Expert-Focused, High-Stakes Products Liability Litigation is Rife With Unreliable Opinions and Methodologies.

Experience in the modern era shows that products liability litigation, in which expert testimony has been allowed despite challenge to its reliability, can generate mammoth verdicts including punitive damages.[4] The stakes are high and, therefore, such cases should generate high-calibre expertise. Yet, many experts flourish in the litigation industry as mere "hired guns." Many essentially offer opinions lawyers want to hear. Many push the envelope of advocacy beyond reasonable limits and take liberties with the facts, the sciences or engineering methodologies. Since many lawyers only retain experts to "create" an issue of fact and get their case to the jury, the dignity and integrity of the particular expertise can become a serious casualty.

Indeed, in a dramatic new development illustrating the apparent inability of courts to satisfactorily screen against "courtroom testimony given by physicians that ignores scientific

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4 See *e.g.*, *Robinson v. Ford Motor Co.*, No. CA 96-0200 (Miss. Cir. Ct., 21st Dist., Holmes County, July 17, 1998) (Mississippi jury awards nearly $145 million including $120 million punitive damages in death claim alleging unstable handling design of 1988 pickup truck), reported in 26 BNA, PRODUCT SAFETY & LIABILITY, No. 29, at. 682 (July 24, 1998) ("*Daubert* motion" to exclude testimony of expert regarding alleged defect and causation denied).

studies as well as universally accepted standards of medical care" and to adequately police against "'junk science' presented by physicians," the American Medical Association (AMA) House of Delegates, in 1997, passed Resolution 221 establishing an AMA policy that testimony by physicians is "considered the practice of medicine," and that all physician expert testimony "should be subject to peer review." See AMA Resolution 221, "*Peer Review of Medical Expert Witness Testimony*" (as adopted by the House of Delegates at the AMA Interim Meeting 1997). The Report of the AMA Board of Trustees supporting Resolution 221 cites the Federal Judicial Center's statistics that physicians and other medical experts represent the largest proportion of expert witnesses, testifying in at least half of all federal civil trials. AMA B of T Rep. 5-A-98, at 3. The Report summarizes a variety of excesses. "Examples abound regarding the continued problems of false and/or misleading physician testimony." Such abuses "lead to poor decision making by our judges and juries" even though expert testimony "should be an objective resource to these persons." *Id.* at 4.

This arresting development suggests that, despite existence of *Daubert* gatekeeping criteria concededly applicable to "scientific" medical testimony, and despite routine practice that medical testimony be based upon a "reasonable degree of medical certainty" or "medical probability," see *Shulz v. Celotex Corp.*, 942 F.2d 204, 208-09 (3d Cir. 1991) (surveying case law); *McMahon v. Young*, 276 A.2d 534, 535 (Pa. Sup. Ct. 1971) ("if a physician cannot form an opinion with sufficient certainty so as to make a medical judgment, neither can a jury use that information to reach a decision"), the courts' efforts to screen for reliability actually may need strengthening, not weakening.

The problems are not confined to medical experts. In products liability cases, experts frequently produce opinions that are inherently speculative or conclusory or that are based upon subjective notions rather than solid expertise. Consider, for example, the following survey of categories of unreliable

testimony which, without effective *Daubert* screening or appellate relief, would infest the courts.

Untestable Concepts. In *Stanczyk v. Black & Decker, Inc.*, 836 F. Supp. 565 (N.D. Ill. 1993), a products design claim involving a saw injury, plaintiff's expert offered a "concept" of an allegedly safer alternative design. One problem was that the expert "offered no testable design to support his concept. And the history of engineering and science is filled with finely conceived ideas that are unworkable in practice." *Id.* at 567. Other *Daubert* admissibility criteria were considered by the court and found lacking. *Ibid.* See also *Allen v. Minnstar, Inc.*, 8 F.3d 1470 (10th Cir. 1993) (summary judgment granted in a claim that a boat propeller should have had a guard because the expert could not demonstrate a practicably feasible alternative design; claimant must show that the devices exist and are not merely speculative).

In *Pestel v. Vermeer Mfg. Co.*, 64 F.3d 382 (8th Cir. 1995), the expert mechanical engineer asserted that a guard could have been made for a stump cutter that would have prevented the foot injury. He welded two guards from a different model cutter and placed a wire mesh between them but did little else. He did not look at other manufacturers' cutters, did not conduct a patent search, did not consult to see how his design would work in the field and did not test his proposed guard. The defendant, however, did test the proposed guard and showed its inadequacies. The trial judge's exclusion of the proposed alterative was upheld on the ground the testimony was not scientifically valid. See also *Peitzmeier v. Hennessy Industries, Inc.*, 97 F.3d 293 (8th Cir. 1996), cert. denied, 117 S.Ct. 1552 (1997) (tire-changing machine alleged to be defective; expert's proposed safety alternative consisted of a "series of rough sketches that have not been adapted into engineering drawings, much less prototypes"; efficacy in reducing injuries "wholly speculative"); *Dancy v. Hyster Co.*, 127 F.3d 649 (8th Cir. 1997), cert. denied, 118 S.Ct. 1186 (1998) (injury claim from lift

truck's overturn; expert's design of a proposed safer alternative guard had not even been attempted; expert did not consider the effect his envisioned device would have on the effective and safe operation of the lift truck).

Mere Possibilities. Often experts opine on key issues but carefully use vague or obtuse language to mask the unreliability of their opinions or methodologies. In *Pries v. Honda Motor Co.*, 31 F.3d 543, 544-45 (7th Cir. 1994), an auto crashworthiness claim alleging the plaintiff's quadriplegia was caused by ejection due to seat belt and window defects, the biomechanics expert opined that the seat belt latch was defective because it was "possible" for objects to strike and open it during an accident. The forces in a courtroom demonstration that opened the latch, however, could not be related by the expert to the forces in the accident. The expert also opined that laminated glass should have been used instead of tempered glass because there was a "greater chance" of the occupant being restrained in the accident. The Seventh Circuit found such testimony unscientific and unreliable under *Daubert*.

Flawed Testing. Even when experts purport to test their theories, close scrutiny is required to determine reliability of the test evidence. An example is *Bogosian v. Mercedes-Benz of North America*, 104 F.3d 472 (1st Cir. 1997), an alleged transmission defect claim in which a parked car rolled backward striking plaintiff. The expert's proposed test evidence was flawed since the vehicle was examined away from the site of the accident; no attempt was made to replicate the known facts of the injury-producing event; the vehicle's wheel was raised in the test but not in the sloped driveway; the lever was shifted rapidly from drive toward park by the expert, but there was no evidence about plaintiff's speed in shifting the lever; plaintiff had testified she put the lever in "latched park" but the expert assumed the lever was in a position short of that, thereby effectively having plaintiff present a witness "who would testify that her own unwavering testimony was incorrect." *Id.* at 479.

Misinterpreted Regulations. One of the pernicious abuses of expert testimony is an expert's personal, subjective interpretation or misconstruction of a government regulation or standard in order to further the aims of the litigant. Screening out such abuse is particularly onerous since it is estimated there are some 89,000 standards of which 39,000 are nongovernmental or voluntary standards developed by 600 industry-based organizations. See C.P. Colver and J.C. Colver, *Standards and Their Importance in Products Litigation*, DEFENSE RESEARCH INST., FOR THE DEFENSE 14, 15 (April 1992). An example of the phenomenon is *Bammerlin v. Navistar Int'l Transp. Corp.*, 30 F.3d 898 (7th Cir. 1994), an injury claim based on a collision of one loaded tractor-trailer into the rear of another. Plaintiff alleged the seat belt assembly did not comply with federal safety standards and offered several experts' supporting testimony which was allowed by the trial judge. The Seventh Circuit reversed calling the ruling "a serious mistake." The meaning of federal regulations "is not a question of fact, to be resolved by the jury after a battle of experts. It is a question of law, to be resolved by the court." *Id.* at 900. The safety standards, upon review, did not have the meaning plaintiff's experts gave them. The district court either should have excluded the testimony or instructed the jury that as a matter of law defendant's seat belt assembly complied with the federal requirements. *Ibid.* See also *DePaepe v. General Motors Corp.*, 141 F.3d 715 (7th Cir. 1998) (As a matter of law experts misinterpreted federal standard as to sun visor padding requiring reversal). See generally, M. Hoenig, *May Experts Interpret Regulations in Jury Trials?*; N.Y.L.J., Sept. 12, 1994, at 3; M. Hoenig, *A Bar to Experts Speculating on Regulations or Motives*, N.Y.L.J., May 11, 1998, at 3 (discussing *DePaepe* rulings).

Speculation About Corporate Motives. *DePaepe*, *supra*, 141 F.3d 715, also exposed yet another abuse of expert testimony, i.e., the expert's interpretation of a particular item of corporate conduct or a document produced in discovery

followed by the expert's subjective conclusions as to what the manufacturer's intent or motive must have been. Plaintiff's expert was allowed to opine that the manufacturer reduced the padding in the sun visors in order to save money. Defendant's position was that excessively thick visors pose hazards of their own. The appellate court held the plaintiff's expert testimony to be wholly speculative regarding defendant's motives. Experts "need analytically sound bases for their opinions." The expert "lacked any scientific basis for an opinion about the motives of General Motors' designers." *Id.* at 719 (also discussing shortcomings in test evidence).

Speculation About Alternative Warnings. Loose standards of screening for expert reliability are particularly egregious in litigation over alleged lack of or insufficient warnings. Indeed, poor gatekeeping criteria in the warnings area can cause particularly unwholesome pressures because claimants typically argue, with superficial appeal, that some verbiage should have been added to a product, a sticker, a label, an owner's manual or the like. What could be so difficult about merely adding a few more words? But such arguments ignore the plain fact that there are limits to the amount of information consumers can or will read, process, retain or, in the case of more complex products, revisit and reread. The exercise of crowding multiple warnings, instructions and directions or "piling on" warning after warning for every conceivable risk, triggers significant dangers of overwarning, label clutter and dilution of the more necessary warning message. See *Broussard v. Continental Oil Co.*, 433 So.2d 354, 358 (La. Ct. App.), cert. denied, 440 So.2d 726 (La. Sup. Ct. 1983) (decreased effectiveness of all warnings); *Cotton v. Buckeye Gas Prods. Co.*, 840 F.2d 935, 937-38 (D.C. Cir. 1988) (additional warnings not cost-free; dangers of dilution of key warnings).[5]

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5 Many of the problems and misconceptions attending warnings litigation are reflected in legal commentary. See generally, J. Henderson & A. Twerski, (con't)

An example of such tensions is presented in *Shepherd v. Michelin Tire Corp.*, ___ F. Supp.2d ___, 1997 Westlaw 907567 (N.D. Ala. 1997), appeal dismissed (11th Cir. June 9, 1998), where a professor of psychology and expert on warnings testified in a Fed. Evid. Rule 104(a) *Daubert* hearing. The wrongful death claim alleged that warnings against inflating a tire on a mismatched rim were insufficient. *Daubert's* admissibility factors guided the court's decision to exclude the testimony. In an incisive analysis, the district court observed that warnings research generally concludes that warnings are not particularly effective behavior modifiers; that no empirical data supported the expert's opinion that any particular sidewall warning will make tires safer because there's "no testing, jurying, or test marketing of any particular sidewall warnings"; that defendant's expert actually tested plaintiff's proposed warnings in the real world where personnel at 11 out of 12 service stations ignored the warnings; and that the expert could not state with any degree of certainty that his proposed warning system would "probably" have prevented the accident. "In other words, [the expert's] testimony does not meet the preponderance test on proximate causation, even if he were allowed to testify." There is a big gap between the notion "it could have made a difference" as opposed to "it is highly probable that it would have made a difference." *Ibid.*

Countervailing Dangers. One of the more pernicious byproducts of allowing unreliable expert testimony occurs when experts' proposed safer alternative designs or warnings arguably

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Doctrinal Collapse in Products Liability: The Empty Shell of Failure to Warn, 65 N.Y.U. L. REV. 265 (1990); William H. Hardie, *A Critical Analysis of On-Product Warning Theory*, 22 BNA, PRODUCT SAFETY & LIABILITY REP., Feb. 11, 1994, at 145, reprinted in substantially the same form as Chapter 3 of PRODUCTS LIABILITY IN NEW YORK: STRATEGY AND PRACTICE, pp. 97-137 (N.Y. STATE BAR ASS'N 1997) (Neil A. Goldberg, ed.); M. Hoenig, *The Influence of 'Daubert' on Warnings*, N.Y.L.J., June 8, 1998, at 3; *More on Warnings*, N.Y.L.J., Jan. 10, 1994, at 3.

would "help" the particular claimant in the case at bar but would impose countervailing dangers to others in other circumstances. In reality, the plaintiff's theory in such cases then boils down to an expert's "preferred" design as a "trade-off" to the detriment of other victims elsewhere. For a court to readily accept this tenuous liability thesis, it has to be prepared, in effect, to "make" the manufacturer "accept" the proposed alternative design and thereby create "new" plaintiffs in other lawsuits. Society, of course, does not "win" in the slightest. At most, judicial administration is momentarily appeased by processing the case at hand.

Courts focus primarily upon the cases before them and lack the time, resources, scientific know-how, or expertise to truly evaluate any countervailing dangers. Courts, after all, are not legislatures or expert administrative agencies that hold hearings and conduct research in order to make such momentous decisions.[6] A particular lay jury in one state should not effectively become the arbiter of designs to be used nationally when there may be other significantly injurious contexts. A jury in the given case cannot truly assess why it may be condoning the maiming of others elsewhere. Frequently, wholly untested design alternatives presenting countervailing dangers are proposed by experts who are marginally qualified in their field and, in effect, are journeymen testifiers flitting from case to case. Sometimes, the expert merely eyeballs the design feature in question and pronounces the self-created remedy. Where countervailing risks of the alleged cure are presented, the nature and quality of the foundation for the expert's opinion is particularly crucial. "Reliability" in vigorous doses should be

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6 An example is the question whether air bags should be mandated on all cars. The issue took many years for the federal safety agency to resolve after much study and input, and remains a matter of controversy today, as illustrated by subsequent agency rulings permitting air bag cut-off switches to be installed in older cars to avoid injury to children and some adults. 62 Fed. Reg. 62,406 (1997).

required.

An example of tensions from countervailing dangers posed by expert testimony is reflected in Judge Easterbrook's dramatic concurring opinion in *Carroll v. Otis Elevator Corp.*, 896 F.2d 210, 212 (7th Cir. 1990), an injury claim stemming from a store escalator mishap. A child pushed the bright red emergency stop button. Plaintiff's claim against the manufacturer was that the button was unguarded and unreasonably attractive to children. The expert, an experimental psychologist, testified that bright red was a poor choice because it attracts small children. He also opined the button was too easy to push and should have been covered.

Judge Easterbrook said, "[t]hose seeking to burlesque modern products liability law could do no better than to examine this case." 896 F.2d at 212-13 (concurring opinion):

> "[E]scalators have stop buttons at each end. When clothing (worse, a finger) is pulled between the moving metal stairs and the grate or skirt panel, a press on the button may save life or limb. A person caught in an escalator is likely to panic, so the button must be prominent and easy to push - especially important because those least experienced with escalators, most likely to stick objects or fingers in the grate, and so most likely to get caught, are children."

Id. at 213. The subject stop buttons were bright red precisely "to attract attention" and their location was intended to "be within sight and reach of one entangled in the grate," yet recessed and half-shielded "to prevent activation by falling packages and errant feet." *Id.* at 213. Thus, the very "faults" attacked by the expert actually were safety features for those in decidedly more precarious, panic-ridden situations. *Id.* at 215 (describing risk/utility considerations resulting in adopted design). See also *Elliot v. Brunswick Corp.*, 903 F.2d 1505, 1507-1510 (11th Cir. 1990), cert. denied, 498 U.S. 1048 (1991) (claim that boat propellers that struck child should have been guarded; liability

rejected in part because danger was obvious; plaintiff's proposed guard could cause utilitarian disadvantages such as loss of power and speed, dangerous handling characteristics and creation of safety hazards; and because of danger that guard can entrap human limbs increasing risks of drowning, mutilation and amputation, and, at high speeds, could cause fatal injuries). Obviously, as these cases illustrate, expert testimony introducing untested designs and countervailing dangers needs to be screened carefully for reliability.

B. The Primary Goals of Tort and Products Liability Law - Compensation and Deterrence - Require that Expert Testimony Be Truly "Reliable."

One major reason for imposing tort liability generally and products liability in particular is that negligent wrongdoers or manufacturers will be deterred from unreasonable conduct and from marketing unsafe products. See *Escola v. Coca-Cola Bottling Co.*, 150 P.2d 436, 440 (Cal. Sup. Ct. 1994) (Traynor, J. concurring); Owen, *Rethinking the Policies of Strict Product Liability*, 33 VAND. L. REV. 681, 709 (1980). When a manufacturer is "made liable to the consumer for defects in the product [it] will do what can be done to see that there are no such defects." W. Prosser & W. Keeton, THE LAW OF TORTS § 4 at 25-26 (5th ed. 1984). Thus, "preventing accidents by deterring the distribution of unsafe products is one of the prime goals of tort law." *Salt River Project Agricultural Improvement & Power Dist. v. Westinghouse Elec. Corp.*, 694 P.2d 198, 206 (Ariz. Sup. Ct. 1984). See *Daly v. General Motors Corp.*, 575 P.2d 1162, 1169 (Cal. Sup. Ct. 1978) (speaking of manufacturer's "incentives" to produce safe products). Deterrence of misconduct likewise is said to be a fundamental goal (along with punishment) of imposing punitive damages. RESTATEMENT (SECOND) OF TORTS, § 908, cmt. b (1979).

Obviously, another primary objective is to provide victims of defective products fair compensation and to "insure

that the costs of injuries resulting from defective products are borne by the manufacturers . . . rather than by the injured persons who are powerless to protect themselves." *Escola, supra*, 180 P.2d at 440. Merchants and manufacturers have the capacity to internalize the costs of accident losses and distribute them among the many consumers who purchase their products. W. Prosser & W. Keeton, THE LAW OF TORTS § 98 at 693 (5th ed. 1984). Clearly, the foregoing aims of deterrence and compensation are subverted if jury decisions and consequent judgments are based upon unreliable, untrustworthy expert testimony. Since tort verdicts have the powerful effect of regulating behavior,[7] it would be unconscionable if the incentives for product redesign and avoidance of defects were to be frustrated by decisions predicated upon expert opinions devoid of trustworthy foundation. Worse, it is unacceptable for ill-informed jury decisions to be based upon unreliable testimony regarding proposed alternative designs that actually could produce significant countervailing dangers to other persons.[8]

The policy goal of providing fair compensation to injured victims likewise presupposes that judgments are imposed only when products truly are defective and not reasonably safe and

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7 See *San Diego Building Trades Council v. Garmon*, 359 U.S. 236, 247 (1959) ("[State] regulation can be as effectively exerted through an award of damages as through some form of preventive relief. The obligation to pay compensation can be, indeed is designed to be, a potent method of governing conduct and controlling policy."); *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504, 521 (1992) (same); *Harris v. Ford Motor Co.*, 110 F.3d 1410, 1415 (9th Cir. 1997) (rule of common law which permits recovery of monetary damages for its breach self-evidently sets a standard.)

8 Indeed, Judge Easterbrook colorfully suggests in *Carroll, supra*, that unjustified judgments ought not to compel manufacturers to modify their products in response to verdicts based on alternatives that present countervailing dangers. 896 F.2d at 215-16.

when they actually are the proximate cause of the injury. The theory that manufacturers should internalize costs of accidents and distribute them to consumers through risk-spreading mechanisms such as increased prices and insurance works well only if the affected products truly are unreasonably dangerous and cause injury. When a judgment is based upon unreliable expert testimony, however, effectuation of these policies breaks down. Fairness suffers. The integrity of the system suffers. Defendants and consumers bear costs they need not and should not.

Effective monitoring also is required because huge compensatory verdicts and calamitous punitive damage awards can create polycentric effects. These include the potential for bankruptcies, business disruptions, loss of jobs, discontinuations of useful and desirable product lines, diversion of resources from valuable research and development budgets and the chilling of new, innovative and vitally needed products.

Such results are not imaginary. In 1988 the California Supreme Court scrapped strict liability for prescription drug design claims in part because expansive liability and litigation had impaired availability of drugs at affordable prices and chilled development of beneficial pharmaceuticals. The court cited a precipitous decrease in available vaccines and a steep increase in their costs. *Brown v. Superior Court*, 655 P.2d 1260 (Cal. Sup. Ct. 1982). Other examples of chilled innovations, discontinued research and abandoned products abound. See A.W. Cortese & K.L. Blaner, *The Anti-Competitive Impact of U.S. Product Liability Laws: Are Foreign Businesses Beating Us At Our Own Game*, 9 J. Of LAW & COMMERCE 167, app. A at 198-202 (1989).[9]

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9 The authors identify adverse effects fostered by products liability including plant closings, discontinued product lines, decisions not to introduce new products, and discontinued research. Vaccines, contraceptives, sporting goods and safety equipment are examples of discontinued product lines. (con't)

C. The Search For the Truth and Integrity of the Court System Mandate That Expert Testimony Be Truly Trustworthy.

Indisputably, the search for the truth is a major objective of litigation. "There is no gainsaying that arriving at the truth is a fundamental goal of our legal system." *James v. Illinois*, 493 U.S. 307, 311 (1990); *Daubert, supra*, 509 U.S. at 596 (quest for truth in the courtroom). This policy goal happens to coincide with the tort objectives of compensation and deterrence, since the latter should be effectuated (as nearly as practicably feasible) on determinations grounded upon the truth. The role of our evidentiary standards is not to facilitate mesmerizing our juries or stampeding them towards emotional decisions but, rather, to have them well informed when they engage in the search for the truth. Unreliable, untrustworthy, speculative, unfounded, ill-based and artfully evasive expert opinions plainly subvert the jury's search for the truth.

Another policy imperative justifying meaningful admissibility criteria is the aim of fostering the public's perception of the integrity of the judiciary and the administration of justice. The Federal Judicial Center's Reference Manual on Scientific Evidence (1994), at p. 2, called attention to the statement in the final report of the Carnegie Commission on Science, Technology and Government:

Examples of products that could have been on the market today if product liability were less devastating include a substitute for asbestos, a non-chemical pesticide replacement, a portable kidney dialysis machine and a chemical process that speeds up decomposition of hazardous wastes, to mention just a few. Even academic innovation has been chilled by products liability. Numerous universities, often the source of new product development and technological advances, license new products to small businesses that need the advantages a particularly innovative product might bring. However, due to concerns that large, well-financed universities might be "deep pocket" targets for products liability suits involving these new products, universities are reluctant to continue this licensing scheme. *Ibid.*

> "[T]he courts' ability to handle complex science-rich cases has recently been called into question, with widespread allegations that the judicial system is increasingly unable to manage and adjudicate science and technology . . . issues. Critics have objected that . . the expert witnesses on whom the system relies are mercenaries whose biased testimony frequently produces erroneous and inconsistent determinations. If these claims go unanswered, or are not dealt with, confidence in the judiciary will be undermined as the public becomes convinced that the courts . . . are incapable of resolving some of the most pressing legal issues of our day."

Judge William W. Schwarzer's Introduction to the Manual, at p. 2, conceded "the existence of a problem that affects the administration of justice in the decision of particular cases and in the larger dimension of the public's perception of the courts." These problems of public perception will not be dissipated if the salutary promotion of meaningful gatekeeping triggered by *Daubert* is whittled down rather than strengthened. This Court now has the opportunity to fortify effectuation of cardinal policies and to reinvigorate the gatekeeping task from which certain circuit courts, including the court below, have strayed.

II. TRIAL COURT "GATEKEEPING" OF SCIENTIFIC AND TECHNICAL EXPERT TESTIMONY, INCLUDING ENGINEERING EXPERTS IN PRODUCTS LIABILITY CASES, IS APPROPRIATELY ACHIEVED BY FLEXIBLE RESORT TO *DAUBERT'S* NONEXCLUSIVE FACTORS.

A. The Science/Engineering Distinction and the "Personal Experience" Exception Have No Merit for Gatekeeping Purposes In Typical Products Liability Cases.

The first major products liability case to stray from the *Daubert* analytical path was *Compton v. Subaru of America, Inc.*, 82 F.3d 1513 (10th Cir. 1996), cert. denied, 117 S.Ct. 611 (1996), a case strongly relied upon by the Eleventh Circuit below. Plaintiff claimed that a vehicle's roof was defectively designed in failing to prevent rear-compartment roof intrusion and a spinal injury in a vehicle rollover. The accident was caused when one of the teenagers yanked the steering wheel, causing the driver to lose control. Plaintiff's expert, an aerospace and mechanical engineer, suggested his own design standard allowing only two to three inches of roof crush after a 50 m.p.h. accident. Under this personal standard, a roof would have to withstand average forces of 48,000 to 71,000 pounds — a criterion the trial court remarked "seems more applicable to a Sherman tank than to any vehicle the ordinary consumer would drive." 82 F.3d at 1516.

The Tenth Circuit upheld the verdict by, in effect, doing an end run around *Daubert's* reliability criteria. The court held that *Daubert's* list of admissibility factors applies "only when a proffered expert relies on some principle or methodology." In other words, application of the *Daubert* factors is unwarranted in cases where expert testimony is based solely on experience and training. *Id.* at 1518. In the *Compton* court's view, *Daubert* "sets out additional factors the trial court should consider under Rule 702 if an expert witness offers testimony based on a particular methodology or technique." *Id.* at 1519. Since the witness merely reached his expert conclusions by drawing upon general engineering principles and his 22 years of "experience" as an automotive engineer, *Daubert* "simply has little bearing" on his testimony. *Id.* at 1519.

The wisdom of the foregoing approach is certainly questionable. Institutionally, from the standpoint of federal trial litigation and the policies discussed above, it is a disaster. First, the approach is illogical and unrealistic. The witness in *Compton* assumed the stand as an expert engineer asserting professional

qualifications in a discipline applying the sciences. He claimed 22 years of experience as an automotive engineer and drew upon general engineering principles in reaching his conclusions. These in-court representations amounted to his entrance "ticket" or "visa" to the witness stand as an "expert." Thus, his very standing with the jury (which awarded a $6.5 million verdict) was built on his kinship, expertise and involvement with engineering principles and methodology.

"Engineering" is, in part, defined as the "application of *scientific* and mathematical principles to practical ends such as the design, manufacture and operation of efficient and economical structures, machines, processes and systems." THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 610 (3d ed. 1992) (emphasis added); see also, WEBSTER'S NEW COLLEGIATE DICTIONARY 378 (1973) ("the application of *science* and mathematics by which the properties of matter and the sources of energy in nature are made useful to man in structures, machines, products, systems, and processes.") (emphasis added). Having invited the jury to rely on this witness as an "expert" in the application of scientific and mathematical principles to designs, it makes little sense to dispense with "reliability" criteria concededly applicable to scientific testimony merely because his expert opinion, for tactical reasons, purports to be based solely on personal "experience" and "training."

To separate technical disciplines that use or apply science from science itself [10] and to say that the former are

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10 Indeed, the distinction sought to be drawn in *Compton* between science, on the one hand, and technical disciplines or training such as engineering on the other, runs counter to the broad understanding of what science really is. Dictionaries commonly define science, in part, in terms of activities such as observation, identification, experimental investigation, and theoretical explanation of phenomena as well as "such activities *applied* to an object of inquiry or study." They further refer to science as "knowledge, especially that gained through *experience*." AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 1616 (3d ed. 1992) (emphasis added); see also (con't)

exempt from reliability standards but the latter is bound by them is not only erroneous, it frustrates the search for trustworthiness of expert testimony. *Compton* also is unrealistic because it suffers from the vagueness of the line it draws between "methodology" and other scientific or technical knowledge, especially in design cases. In the area of proposed alternative designs, for example, by definition, the alternative design really is a different *method* of configuring the product. Hence, methodology *is* involved. Thus in *Compton* the expert clearly was proposing that the vehicles be constructed by some other method that would embody his proposed personal standards. By definition, too, alternative designs necessarily "include elements of science, technology and methodology." *Watkins v. Telsmith, Inc.*, 121 F.3d 984, 991 (5th Cir. 1997) (quoting *Tassin v. Sears, Roebuck & Co.*, 946 F.Supp. 1241, 1247 (M.D. La. 1996)).

Second, the *Compton* approach poses an unwholesome irony: if an expert attempts to use a scientific methodology, it must be reliable and trustworthy. However, if an expert forgoes reliance on any established technique or methodology but, instead, injects his own personal opinions, no matter how unrealistic, then trustworthiness criteria are unnecessary. Such an approach penalizes the expert who, laudably, at least attempts to consider science yet rewards the one who, lamentably, avoids science. *Compton's* strained interpretation of *Daubert* has not gone unnoticed by other courts. Thus, in *Watkins*, *supra*, 121 F.3d at 991, a products liability case presenting the same kind of

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WEBSTER'S NEW COLLEGIATE DICTIONARY 1034 (1973) (e.g., "knowledge attained through study or practice"; "something that may be studied or learned like systematized knowledge"; "knowledge concerned with the physical world and its phenomena."). Thus, when an engineering expert, whose very training and experience is based on the application of science to designs, issues opinions based on his "experience and training," it makes little sense to say that standards of reliability, concededly applicable to scientific subjects, become irrelevant. Technology today is an interwoven package in which sciences of all kinds are common threads.

issue, the Fifth Circuit rejected *Compton* and echoed the foregoing irony:

> "[I]t seems exactly backwards that experts who purport to rely upon general engineering principles and practical experience might escape screening by the district court simply by stating that their conclusions were not reached by any particular method or technique. The moral of this approach would be, the less factual support for an expert's opinion, the better. *Compton's* view of the admissibility of expert evidence is untenable."

Third, the *Compton* approach has the tendency to promote unvarnished personal opinions — what products liability lawyers sometimes call mere "net opinions" — unbacked by industry data, scientific principles, peer review, testing or acceptance in the relevant community of experts. Such a development is unwholesome because, as Chief Judge Richard A. Posner pithily observed in *Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316, 319 (7th Cir. 1996), cert. denied, 117 S.Ct. 73 (1996), "an expert who supplies nothing but a bottom line supplies nothing of value to the judicial process." Or, as Judge Kozinski of the Ninth Circuit said in *Daubert* upon remand from this Court: "We've been presented with only the experts' qualifications, their conclusions and their assurances of reliability. Under *Daubert*, that's not enough." *Daubert*, 43 F. 3d 1311, 1319 (9th Cir. 1995).

Fourth, the *Compton* approach, indulged in by the Eleventh Circuit below, actually creates an escape hatch for hired-gun experts or others to avoid meaningful scrutiny for reliability. Virtually any scientific or technical opinion can be converted into an "experience"-based one. See Laser, Note, *Inconsistent Gatekeeping in Federal Courts: Application of Daubert to Nonscientific Expert Testimony*, 30 LOYOLA L.A. L. REV. 1379, 1409 (1997) ("approach seems to turn *Daubert* on its head ... an expert can get around the *Daubert* inquiry by saying that no methodology was used at all," even though "[i]f there is

no methodology, then the expert's opinion is necessarily speculative"); Schofield, Note, *A Misapplication of Daubert: Compton Opens the Gate for Unreliable and Irrelevant Expert Testimony*, 1997 B.Y.U. L. REV. 489, 515 (1997) ("An expert's testimony that is likely to fail under *Daubert's* scientific factors could be repackaged under the guise of technical or nonscientific evidence and could avoid the application of *Daubert*"); M. Hoenig, *Developments Concerning Experts*, N.Y.L.J., Nov. 10, 1997, at 3, 7.

Fifth, the so-called "experience" and "training" exception to applying any *Daubert* criteria, forged in *Compton* and adopted by the Eleventh Circuit below, makes absolutely no sense when applied to typical products liability engineering cases such as that involved here. The Eleventh Circuit's rationale self-exposed the fundamental flaw when it so heavily relied upon the "beekeeper" analogy (*Carmichael v. Samyang Tire, Inc.*, 131 F.3d 1433, 1436 [quoting *Berry v. City of Detroit*, 25 F.3d 1342, 1349-50 (6th Cir. 1994), cert. denied, 513 U.S. 1111 (1995)]). The circuit court below analogized the expert Carlson's testimony about tire failure to that of the beekeeper who testifies from firsthand observations that bumblebees always take off into the wind. But that illustration plainly is not at all analogous to what the expert Carlson said or did in this case.

In the bumblebee hypothetical the testifying beekeeper merely says what he repeatedly saw, what he always observed, a firsthand bit of experiential knowledge beyond the ken of the normal lay juror that allows the expert to assist the jury. But, unlike *Carlson*, the beekeeper in the court's illustration is *not* reconstructing the technical reasons as to *why* the bees always take off into the wind or even how they are able to do so. Nor is the testifying beekeeper coming upon the scene some months or years later, well after the fact, and trying to reconstruct the bee flight events by hindsight. Unlike Carlson, the beekeeper does not attempt to reconstruct from fragmentary physical evidence.

Carlson *did not actually see* the subject tire failure and

accident on the roadway (the hypothetical beekeeper actually *saw* the bees take off into the wind). Carlson did *not actually see* any of the other prior tire failure accidents as they occurred on their respective roadways (the beekeeper *repeatedly saw* the bees as they took off into the wind). Carlson, rather, comes on the scene of each of his tire examinations months and years *after the event* to try to piece together what *may* have happened (the beekeeper is on the scene contemporaneous with the events [the bee flights], directly observes them and knows exactly what happened). Carlson examines only fragmentary evidence, the remains of tire carcasses, skidmarks, etc. and hopes to *reason out* plausible scenarios (the beekeeper observes repeatedly the very fact to which he testifies). Carlson draws inferences, makes deductions, purports to apply engineering principles and sciences, draws on experiences, training, intuition, guesswork or speculation, chooses among possibilities, and then comes up with his purported "expert opinion" (the beekeeper says only what he observed). Carlson's past experiences in examining failed tire carcasses each led to personal conclusions or opinions that have never been verified, tested or vouched for as "correct;" they remain an uncorroborated mass of deductions by one individual using subjective reasoning (the beekeeper, on the other hand, repeatedly observes firsthand and objectively each event without indulging in subjective reasoning processes from fragments of evidence). Carlson attempts to identify a probable cause of what happened long ago (the beekeeper tells us only exactly what happened, and does not speculate as to the cause or why).

The differences between what Carlson and the beekeeper do respectively are not only miles apart, they are more than oceans or even solar systems apart. There is a material and qualitative difference as to what they do, what they see, when they see it, what they say and on what they opine. There are differences as to the evidence upon which they rely, upon the time frame during which they ascertain the basis of their

testimony and the qualitative veracity with which each can speak. In short, there is no comparison in terms of the reasoning process involved, the informational gaps to be filled, and the indicia of trustworthiness of each form of testimony. Carlson makes a "leap" of reasoning as to causation, which, if not cogently shown to be methodologically reliable, is then by definition conclusory, speculative and unverifiably subjective. The beekeeper makes no such leap of reasoning. He repeats only what he observed; threshold reliability with him is not an issue; only credibility is.

Under these circumstances, the Eleventh Circuit missed the mark when it concluded that Carlson's testimony "was more like that of a beekeeper applying his experience with bees." 131 F.3d at 1436. Rather, Carlson's efforts to divine a probable cause of a tire failure he never observed surpass for tenuousness even that of the Eleventh Circuit's hypothetical "aeronautical engineer" who merely "wanted to explain to a jury how a bumblebee is able to fly." *Id.* at 1435. Carlson does not only want to explain how a tire is able to fail. He wants to opine the cause of how and why this particular tire failed on that roadway at that time.

The foregoing fallibility of the "experience and training" exception to *Daubert*, as illustrated in *Compton* and *Carmichael*, shows that the exception is a poor standard to apply to expert testimony in typical products liability cases involving science, engineering, technology and fields akin to or partaking of the applied sciences. An over-generous approach to so-called "experience" experts, as exemplified by the circuit's ruling below, would create a gaping hole in the tapestry carefully woven by *Daubert* and would promote an unwholesome exception that could be exploited so mercilessly and so frequently that the exception would easily swallow the rule.

B. The Seventh Circuit's Approach, Applying *Daubert* Factors to Technical Testimony and Seeking Indicia of "Intellectual Rigor" From Courtroom Experts Akin to Those Demonstrated in Their Professional Work, Offers an Appropriate Model for Gatekeeping.

In *Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316 (7th Cir. 1996), cert. denied, 117 S.Ct. 73 (1996), a distinguished cardiologist with "sterling credentials" opined that a nicotine patch had caused plaintiff's heart attack. In an opinion by Chief Judge Richard A. Posner, the circuit court said the key question was whether the expert's opinion possessed "scientific rigor." 78 F.3d at 318-19. It did not. The object of *Daubert's* guiding criteria was "to make sure that when scientists testify in court they adhere to the same standards of intellectual rigor that are demanded in their professional work." If they do, their evidence (provided it is relevant to some issue in the case) is admissible even if the particular methods used in reaching their opinion "are not yet accepted as canonical in their branch of the scientific community." If they do not, their evidence is inadmissible "no matter how imposing their credentials." *Ibid.* The cardiologist merely expressed what may be an "insightful, even an inspired, hunch concerning the cause of the heart attack," but it lacked "scientific rigor." While the expert's conjecture may be worthy of careful attention, the courtroom "is not the place for scientific guesswork, even of the inspired sort. Law lags science; it does not lead to it. There may be evidence to back up [the expert's] claim, but none was presented to the district court." *Id.* at 319.

The "intellectual rigor" standard was again applied by the Seventh Circuit in *Braun v. Lorillard, Inc.*, 84 F.3d 230 (7th Cir. 1996), cert. denied, 117 S.Ct. 480 (1996), a suit alleging that plaintiff's mesothelioma was caused by a cigarette filter containing a toxic form of asbestos. Plaintiff's expert performed tests on human tissue (which he never performed before)

pursuant to a methodology he had used only on building materials such as bricks. Chief Judge Posner again wrote for the circuit court in upholding exclusion of the evidence. The trial court is "responsible for making sure" that scientists adhere to the same standards of intellectual rigor in court as demanded of them in their professional work. When they depart from the canonical methods, the witness "must have grounds for doing so that are consistent with the methods and usages of his scientific community." *Id.* at 234.

Commenting on the ubiquity of litigation experts sliding outside their area of specialty to offer opinions, the court elaborated on the anti-abuse character of *Daubert's* gatekeeping role.

> "Modern science is highly specialized. An expert in the detection of asbestos in building materials cannot be assumed to be an expert in the detection of asbestos in human tissues.... The fact that the plaintiff's lawyer turned to this nonexpert, having already consulted experts without obtaining any useful evidence, is suggestive of the abuse, or one of the abuses, at which *Daubert* and its sequelae are aimed. That abuse is the hiring of reputable scientists, impressively credentialed, to testify for a fee to propositions that they have not arrived at through the methods that they use when they are doing their regular professional work rather than being paid to give an opinion helpful to one side in a lawsuit." *Id.* at 235.

In *Cummins v. Lyle Industries*, 93 F.3d 362 (7th Cir. 1996), the circuit court elaborated on a number of important gatekeeping concepts in an engineering case. An employee sued for finger injuries sustained on a machine in a workplace accident. The expert's untested, hypothesized alternative designs and warnings were excluded. The Seventh Circuit said that *Daubert* required a two-step analysis: (1) whether the expert's testimony is reliable; and (2) whether the testimony assists the

trier of fact. Step 1 requires assurance "the expert knows whereof he speaks," that the testimony has been subjected to the scientific method and does not amount to "subjective belief or unsupported speculation." The "scientific knowledge" requirement thus establishes a "standard of evidentiary reliability." The evidence must be "genuinely scientific, as distinct from being unscientific speculation offered by a genuine scientist." 93 F.3d at 368.

Testing is an important factor in alternative design cases. Thus failure to substantiate an opinion on the basis of scientific research implicates its reliability. And "bottom line" scientific testimony unsupported by experimental, statistical or other scientific data may be excluded. While hands-on testing is not an "absolute prerequisite" to the admission of expert testimony, expert witnesses must adhere to the same standards of intellectual rigor that are demanded in their professional work.[11] This can be accomplished by, among other things, review of experimental, statistical or other scientific data generated by others in the field. *Id.* at 369.

Many of the considerations attending the expert's proposed alternative design (e.g., compatibility with existing systems and circuits; the relative efficiency of the two designs; the short and long-term maintenance costs of the alternative; the purchaser's ability to service and maintain the alternative; the relative cost of installation and the alternative design's effect on price of the machine) "cannot be determined reliably without testing." *Id.* at 369. Nor did the expert read any studies, surveys or analyses of how this type of machinery is designed, manufactured and used. As to the adequacy of warnings, the

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11 It is interesting to note that the Seventh Circuit's call for harmonizing the expert's intellectual rigor in the courtroom with his professional standards outside the court parallels the objectives of AMA Resolution 221 seeking to upgrade medical expert testimony by subjecting it to peer review outside the courtroom. Point IA *supra*.

expert did not know what alternative warnings would have been effective in the absence of testing. *Id.* at 370.

Cummins also rejected the argument that *Daubert* applies only to "science" but not to "the application of well-known instruments of the engineering profession to a particular and not-out-of-the-ordinary application." The line between "scientific" and "technical" evidence is not a bright one. While it may be that in some "as applied" situations, some of *Daubert's* non-exhaustive factors are worthy of less emphasis than in situations involving more abstract or novel scientific theory, the trial court's basic task remains essentially the same - to ensure that the evidentiary submission is of an "acceptable level of evidentiary reliability.'" *Id.* at 368.

Tyus v. Urban Search Management, 102 F.3d 256 (7th Cir. 1996), cert. denied, 117 S.Ct. 2409 (1997), a non-products decision, confirms and restates significant *Daubert* requirements for admissibility of expert testimony. The case involved allegations of racial discrimination in violation of the Fair Housing Act. One notable ruling was that *Daubert* applies to social science experts just as it applies to experts in the hard sciences. There must be genuine expertise under Evidence Rule 702, and the court testimony must adhere to the "same standards of intellectual rigor that are demanded in [the expert's] professional work." In *all* cases, the trial court must ensure that it is dealing with an expert, "not just a hired gun." *Id.* at 263. The Seventh Circuit disagreed with the Tenth Circuit's decision in *Compton* that the *Daubert* framework is limited to cases of novel scientific theories or methodologies. *Daubert* criteria are appropriate for all kinds of expert testimony, although the measure of intellectual rigor will vary by the field of expertise, and the way of demonstrating expertise also will vary. 102 F.3d at 263.

The Seventh Circuit approach to gatekeeping also examines expert opinions on causation to ensure they express more than mere possibilities, and also considers the

countervailing dangers of experts' proposed alternative designs. See *Pries*, *supra*, 31 F.3d at 544-45. The Seventh Circuit does not allow experts to speculate about government standards and usurp the court's legal function to interpret government regulations. See *Bammerlin*, *supra*, 30 F.3d at 900; *Depaepe*, *supra*, 141 F.3d 715. The circuit court also disallows experts to speculate about corporate motives, requiring, instead, analytically sound bases for their opinions. *DePaepe*, *Ibid*. The Seventh Circuit is sensitive to scrutinize more closely the "hired gun" type of expert to discern whether indicia of reliability are present. *Braun*, *supra*, 84 F.3d at 234-5; *Tyus*, *supra*, 102 F.3d at 263. And the Seventh Circuit questions the value of an expert's "net opinion" since "an expert who supplies nothing but a bottom line supplies nothing of value to the judicial process." *Rosen*, *supra*, 78 F.3d at 319.

The foregoing survey of Seventh Circuit gatekeeping efforts reflects a comprehensive, balanced, consistent, healthy approach to the gatekeeping task. Fears that *Daubert's* criteria will become a formalistic and draconian "lockout" mechanism, too stringently excluding expert testimony, can be addressed by case-[illegible]ase assessments of actual reliability, validity and indicia of trustworthiness. Whether one *Daubert* factor deserves more weight than another in a given case can be decided in light of the particular circumstances. There is no need to go to the other extreme: creation of a "let-it-all-in" rule simply because the witness offers subjective assurances that his personal "experience" supports his personal "net opinion."

The search is for the truth, not which opinion is more glib. The Seventh Circuit has suggested that the in-court testimony must adhere to the "same standards of intellectual rigor that are demanded in [the expert's] professional work." The measure of intellectual rigor may vary by the field of expertise and the way that expertise is demonstrated. The *Daubert* framework surely is flexible enough for that gatekeeping task. *Tyus*, *supra*, 102 F.3d at 263. Perhaps in the privacy of their

thoughts, judges condoning the "experience" exception to *Daubert* first should ponder whether they truly would buy and use - and let their loved ones buy and use - products actually containing some of the untested, unverified, unbuilt design alternatives they let some marginally qualified experts unleash on unsuspecting juries.

CONCLUSION

For the foregoing reasons, Amici submit that the Judgment of the Court below should be reversed.

Respectfully submitted,

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